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EXAMINER

LAI, MICHAEL C

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/749,993	<b>Applicant(s)</b> ROSE ET AL.	
	<b>Examiner</b> MICHAEL C. LAI	<b>Art Unit</b> 2457	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 12-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This office action is responsive to amendment filed on 11/19/2008.

#### ***Response to Amendment***

The examiner has acknowledged the amended claims 1, 10. Claims 1, 3-10, and 12-21 are pending.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments with respect to claims 19-21 have been considered but they are not persuasive.

Applicant's argument, see pages 8-9, with respect to "edge device", is not persuasive. Examiner indicated that Tonnby "doesn't disclose that the device is a silent device or a printer." (first office action paragraph 11). However, further examination reveals that the device in the reference is indeed a silent device or a printer. In the instant application, see page 7 lines 22 through 24, it defines "Silent devices are edge devices that are capable of responding to traffic transmitted by other devices, but that do not initiate traffic on their own." User devices in Tonnby's invention, see Figures 2 and 12, are all edge devices. Besides, the user device does not initiate traffic to other devices except broadcasts a DHCP or an ARP request (see abstract), which is a normal behavior for a silent device like a printer when plugged in to a network. As such, the user device in the reference is indeed a silent device.

Applicant's argument, see pages 9-10, with respect to "receiving a command associating the device to the VLAN", is not persuasive. Tonnby discloses that the users can select services by configuring their apparatuses to a selected one of the VLANs (see page 2, lines 8-10). The claimed limitation does not specify where "a command" is coming from, or if any human being is directly involved. As such, "receiving a command associating the device to the VLAN" could be interpreted as just one way of configuring the device to the VLAN.

In view of the foregoing, the rejection to claims 19-21 is sustained.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 10 recites the limitation "the network administrator" in line 5. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1, 4-5, 10, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonnby et al. (WO 03/067821 A1, hereinafter referred to as Tonnby), in view of Desanti (US 7,095,738 B1, hereinafter referred to as Desanti).

6. Regarding claim 1, Tonnby discloses: In a network including a switching node having a plurality of ports (FIG. 12), a method for dynamically associating one of the ports to a virtual local area network (VLAN) based on a VLAN membership of a device connected to the port, the device being a silent device that responds to traffic transmitted by another device but does not initiate traffic to the other device, the method comprising:

receiving at the switching node a command associating the device to the VLAN (page 2, lines 8-10: The users can select services by configuring their apparatuses to a selected one of the VLAN:S. In this case, the limitation does not specify where "a command" is coming from, or if any human being is directly involved. As such, "receiving at the switching node a command associating the device to the VLAN" could be interpreted as just one way of configuring the device to the VLAN. See below for 103 combined rejection);

transmitting to the plurality of ports in response to the command, a first message configured to generate a response by the device (page 9, lines 10-18);

receiving at a particular port, a second message from the device responsive to the first message (page 14, lines 8-13: The user device UD11 utilizes in conventional manner an ARP request (Address Resolution Protocol) to get a MAC address to the IP address IPSA1. The user device UD11 therefore

transmits broadcast the ARP message which is received by the handler H1 in the penult P1 via the user port UP11.);

identifying the port receiving the second message (page 13, lines 3-8: The handler H1, that gets the frame FR2 via the port UP11, adds the identification for this port It then packs the port identification together with the frame FR2 as a unicast message U1, see FIG. 2, and sends this message to the broadcast handler BH1 in the edge access server EAS.); and

associating the identified port to the VLAN associated with the device (FIG. 8 and page 14, lines 27-29: The register REG11 only comprises the penult's own user ports UP11, UP12 and UP13 on respective lists PL11, PL12 and PL13 and the VLAN tags.).

Tonnby discloses the claimed invention except for specifically indicating the command is from a network administrator. Desanti discloses that a network administrator may use a conventional Command Line Interface (CLI) terminal or window or some other terminal or window in order to configure the respective device (e.g., associating the device's physical network ports with respective VLAN IDs) [col. 9, lines 8-18]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Desanti into Tonnby's method for the purpose of associating a device to a VLAN by a command from a network administrator, thereby providing an easy way for configuring network devices.

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7. Regarding claim 4, Tonnby further discloses: storing a list of addresses learned on the identified port (FIG. 5, and page 10, lines 24-26: Gradually, when the users U11-Um1 send their information, the administrative unit AD1 will build up the register REG1 in the broadcast handler BH1, as shown in FIG. 5.).

8. Regarding claim 5, Tonnby further discloses: the second message includes an address associated with the device, the method further comprising including the address in the list of addresses learned on the identified port (FIG. 7, table TAB1, and page 13, lines 18-21: the information includes the own port address SAMAC1, the VLAN tag TAG1, a subnet mask SM1, the user MAC address UMAC1 and the service agent's own IP address, IPSA1.).

9. Regarding claim 10, Tonnby discloses: A switching node comprising:

a port coupled to a device associated with a virtual local area network (VLAN) (FIG. 12), the device being a silent device that responds to traffic transmitted by another device but does not initiate traffic to the other device;

means for receiving at the switching node a command associating the device to the VLAN (page 2, lines 8-10: The users can select services by configuring their apparatuses to a selected one of the VLAN:S.);

means for transmitting to the port in response to the command, a first message configured to generate a response by the device (page 9, lines 10-18);

means for receiving at the port, a second message from the device responsive to the first message (page 14, lines 8-13: The user device UD11 utilizes in conventional manner an ARP request (Address Resolution Protocol) to

get a MAC address to the IP address IPSA1. The user device UD11 therefore transmits broadcast the ARP message which is received by the handler H1 in the penult P1 via the user port UP11.);

means for identifying the port receiving the second message (page 13, lines 3-8: The handler H1, that gets the frame FR2 via the port UP11, adds the identification for this port It then packs the port identification together with the frame FR2 as a unicast message U1, see FIG. 2, and sends this message to the broadcast handler BH1 in the edge access server EAS.); and

means for associating the identified port to the VLAN associated with the device (FIG. 8 and page 14, lines 27-29: The register REG11 only comprises the penult's own user ports UP11, UP12 and UP13 on respective lists PL11, PL12 and PL13 and the VLAN tags).

Tonnby discloses the claimed invention except for specifically indicating the command is from a network administrator. Desanti discloses that a network administrator may use a conventional Command Line Interface (CLI) terminal or window or some other terminal or window in order to configure the respective device (e.g., associating the device's physical network ports with respective VLAN IDs) [col. 9, lines 8-18]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Desanti into Tonnby's method for the purpose of associating a device to a VLAN by a command from a network administrator, thereby providing an easy way for configuring network devices.



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10. Regarding claim 13, Tonnby further discloses: means for storing a list of addresses learned on the identified port (FIG. 5, and page 10, lines 24-26: Gradually, when the users U11-Um1 send their information, the administrative unit AD1 will build up the register REG1 in the broadcast handler BH1, as shown in FIG. 5.).

11. Regarding claim 14, Tonnby further discloses: the second message includes an address associated with the device, the switching node further comprising means for including the address in the list of addresses learned on the identified port (FIG. 7, table TAB1, and page 13, lines 18-21: the information includes the own port address SAMAC1, the VLAN tag TAG1, a subnet mask SM1, the user MAC address UMAC1 and the service agent's own IP address, IPSA1.).

12. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonnby, in view of Desanti, as applied to claim 1 above.

13. Regarding claims 3 and 12, Tonnby and Desanti don't disclose that the device is a printer. However, it is well known in the networking art that a printer is an important and most used edge device in a network. It would have been obvious to one of ordinary skill in the art at the time of the invention to a printer in the network for the purpose of convenience, e.g., for people traveling outside their office to be able to send print jobs to a hotel printer.

14. Claims 6-8, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonnby, in view of Desanti, and further in view of Berlovitch et al. (US 6,061,334, hereinafter referred to as Berlovitch).

15. Regarding claims 6 and 15, Tonnby further discloses:

determining whether the device associated with the address is a silent device configured to respond to traffic transmitted by another device but not configured to initiate traffic to other devices (figures 2, 12; abstract);

transmitting to the plurality of ports based on the determination, a third message configured generate a response by the device (page 4, lines 4-7: The access system has a broadcast handler system and broadcast messages involved in service access or service use are picked up by this system in the penult hosting the user port);

receiving at a second port, a fourth message from the device responsive to the third message (page 14, lines 8-13: The user device UD11 utilizes in conventional manner an ARP request (Address Resolution Protocol) to get a MAC address to the IP address IPSA1. The user device UD11 therefore transmits broadcast the ARP message which is received by the handler H1 in the penult P1 via the user port UP11);

identifying the second port receiving the fourth message (page 13, lines 3-8: The handler H1, that gets the frame FR2 via the port UP11, adds the identification for this port It then packs the port identification together with the frame FR2 as a unicast message U1, see FIG. 2, and sends this message to the broadcast handler BH1 in the edge access server EAS); and

associating the second port to the VLAN associated with the device (FIG. 8 and page 14, lines 27-29: The register REG11 only comprises the penult's own

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user ports UP11, UP12 and UP13 on respective lists PL11, PL12 and PL13 and the VLAN tags).

Tonnby and Desanti do not disclose: detecting a triggering event removing the address associated with the device from the list of addresses learned on the identified port. However, Berlovitch discloses an apparatus to monitor and update changes in the configuration of the network (col. 7, lines 55-64, and col. 25, lines 41-53. The monitoring and updating are for both physical and logical changes in the network.).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Berlovitch into Tonnby's and Desanti's method to monitor and update network configuration changes for the purpose of keeping network configuration up-to-date, thereby providing better management of network resources.

16. Regarding claims 7-8, and 16-17, Tonnby and Desanti don't disclose: the triggering event is a port down event and the port down event is generated in response to the device being decoupled from the identified port. However, Berlovitch teaches a port down event is generated in response to the device being decoupled from the identified port (col. 36, lines 42-46: A communication failure. Examples of communication failures include a failed attempt of a NetWare client end-station to initially connect to a server end-station, and disconnection of a NetWare client end-station from a server end-station).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Berlovitch into Tonnby's and

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Desanti's system to generate a port down event in response to the device being decoupled from the identified port for the purpose of informing the system about the removal of the device, thereby providing better management of network resources.

17. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonnby, in view of Berlovitch et al. (US 6,061,334, hereinafter referred to as Berlovitch).

18. Regarding claim 19, Tonnby discloses a switching node comprising:

- one or more ports receiving and transmitting data units (Tonnby FIG. 12);
- a first table storing a list of addresses learned on the one or more ports (Tonnby FIG. 5, register REG1);

- a first module coupled to the first table (Tonnby FIG. 2, broadcast handler BH1); and

- a second module coupled to the first module, determines whether the address is associated with a silent device configured to respond to traffic transmitted by another device but not configured to initiate traffic to other devices (figures 2, 12, abstract), and forwards the address to the second module based on the determination, further characterized in that the second module transmits to the one or more ports a first message configured to generate a response by the silent device associated with the forwarded address (Tonnby page 4, lines 4-7: The access system has a broadcast handler system and broadcast messages involved in service access or service use are picked up by this system in the penult hosting the user port.), also characterized in that the first module receives at a particular port, a second message from the silent device responsive to the

first message (Tonnby page 14, lines 8-13: The user device UD11 utilizes in conventional manner an ARP request (Address Resolution Protocol) to get a MAC address to the IP address IPSA1. The user device UD11 therefore transmits broadcast the ARP message which is received by the handler H1 in the penult P1 via the user port UP11), identifies the particular port receiving the second message (Tonnby page 13, lines 3-8: The handler H1, that gets the frame FR2 via the port UP11, adds the identification for this port It then packs the port identification together with the frame FR2 as a unicast message U1, see FIG. 2, and sends this message to the broadcast handler BH1 in the edge access server EAS), and associates the identified port to a VLAN associated with the silent device (Tonnby FIG. 8 and page 14, lines 27-29: The register REG11 only comprises the penult's own user ports UP11, UP12 and UP13 on respective lists PL11, PL12 and PL13 and the VLAN tags).

Tonnby doesn't disclose that a second module coupled to the first module, characterized in that the first module detects a triggering event, removes an address from the list of addresses stored in the first table based on the triggering event. However, Berlovitch discloses an apparatus to monitor and update changes in the configuration of the network (Berlovitch col. 7, lines 55-64, and col. 25, lines 41-53. The monitoring and updating are for both physical and logical changes in the network).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Berlovitch into Tonnby's method to

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monitor and update network configuration changes for the purpose of keeping network configuration up-to-date, thereby providing better management of network resources.

19. Regarding claims 20, Tonnby doesn't disclose: the triggering event is a port down event and the port down event is generated in response to the device being decoupled from the identified port. However, Berlovitch teaches a port down event is generated in response to the device being decoupled from the identified port (col. 36, lines 42-46: A communication failure. Examples of communication failures include a failed attempt of a NetWare client end-station to initially connect to a server end-station, and disconnection of a NetWare client end-station from a server end-station).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Berlovitch into Tonnby's system to generate a port down event in response to the device being decoupled from the identified port for the purpose of informing the system about the removal of the device, thereby providing better management of network resources.

20. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tonnby, in view of Berlovitch, as applied to claim 6 above, and further in view of Rueda et al. (US 2002/0112076 A1, hereinafter referred to as Rueda).

21. Regarding claim 21, Tonnby and Berlovitch do not disclose wherein the triggering event is fulfillment of an ageing time for removing the address. However, Rueda teaches such a limitation (page 23, paragraph 0333: After a period of inactivity, is safe to delete the appropriate route from the IP routing table.).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Rueda into Tonnby's and Berlovitch's system to remove the address from the list when the entry is no longer in use for the purpose of housekeeping, thereby providing better management of network resources.

22. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonnby, in view of Desanti and Berlovitch, as applied to claim 6 above, and further in view of Rueda et al. (US 2002/0112076 A1, hereinafter referred to as Rueda).

23. Regarding claims 9 and 18, Tonnby, Desanti and Berlovitch do not disclose wherein the triggering event is fulfillment of an ageing time for removing the address. However, Rueda teaches such a limitation (page 23, paragraph 0333: After a period of inactivity, is safe to delete the appropriate route from the IP routing table.).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Rueda into Tonnby's, Desanti's and Berlovitch's system to remove the address from the list when the entry is no longer in use for the purpose of housekeeping, thereby providing better management of network resources.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objection made. Applicant must show how the amendments avoid such references and objections. See 37 CFR 1.111(c).

Vig, US Patent Number 6,262,988 B1, has taught a network printer as a silent station in a switched IP network.

Tarui et al., US 2005/0114507 A1, has taught changes such as addition or removal of a device in a system composed of a number of devices are automatically detected and the physical location of the devices is managed.

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are



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applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Lai whose telephone number is (571) 270-3236. The examiner can normally be reached on M-F 8:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael C. Lai  
30JAN2009

/YVES DALENCOURT/  
Primary Examiner, Art Unit 2457